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Rick V. Murakami

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EXAMINER

NGUYEN, NAM V

ART UNIT

PAPER NUMBER

2612

MAIL DATE

DELIVERY MODE

10/30/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

09/758,836

Applicant(s)

MURAKAMI ET AL.

Examiner

Nam V. Nguyen

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) ✓  
Paper No(s)/Mail Date 6/15/07.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This communication is in response to applicant's Amendment which is filed August 13, 2007.

An amendment to the claims 1-20 and 23-25 has been entered and made of record in the application of Murakami et al. for a "device using histological and physiological biometric marker for authentication and activation" filed January 10, 2001.

A new set of claims 26-27 are introduced.

Claims 1-27 are now pending in the application.

### ***Response to Arguments***

The replacement drawing(s) were received on August 13, 2007. These drawing are accepted.

In view of applicant's amendment to amend the claim 19 to overcome insufficient antecedent basis, therefore, examiner has withdrawn the Objections to claim 19.

Applicant's amendments to the rejected claims are insufficient to distinguish the claimed invention from the cited prior arts or overcome the rejection of said claims under 35 U.S.C § 102(b) and 35 U.S.C § 103(a) as discussed below. Applicant's amendment and argument with

Art Unit: 2612

respect to the pending claims 1-20 and 23-25, filed August 13, 2007, have been fully considered but they are not persuasive for at least the following reasons.

On page 11, second paragraph, Applicant's arguments with respect to the invention in Lofberg does not teach or suggest a biometric sensor configured to obtain an internal physiological characteristic is not persuasive. The claims in a pending application should be given their broadest reasonable interpretation. In re Pearson, 181 USPQ 641 (CCPA 1974).

As defined by claim 1, the data carrier of Lofberg includes a sensor device (2) for obtaining heat transmission from the finger to a sensing device (column 7 lines 8 to 24; see Figures 1-4), a memory (6), a transmitter LED (45), a photo transistor (46) (column 7 lines 49 to column 8 line 29; see Figure 4), and wherein said biometric sensor device (2) further comprises a switch (10) on the sensing elements of the sensing matrix 9' (column 5 lines 11 to 29; see Figures 1 and 4). Clearly, Lofberg discloses a biometric sensor configured to detect an internal biometric characteristic.

Furthermore, Lofberg discloses a reception of information from the finger tip pattern may be obtained by the use of the heat transmission from the finger to a sensing device comprising a thermosensitive element. Then the finger print lines can be distinguished because transmission of heat from a finger print line to a sensing element is greater than the heat transmission from the interval between two finger print lines to a sensing element. With reference to FIG. 3a, the internal contact plate 32 may then be replaced by a thermistor element with temperature-dependent resistance. When a galvanic contact is created between plate 30 and thermistor 32, a current is obtained through the current loop closed thereby between lines 25 and 26 (see FIG. 2),

Art Unit: 2612

which is dependent on the temperature of the thermistor. Accordingly, the rate of current is decided by the position of the thermistor relative to a finger print line. If the registration means 34 comprises a chargeable CCD-element, its amount of charge after the interval of information reception indicates the position of the finger print line relative to the thermistor 32. By expressing the value of charge by a bit sequence comprising eight bits, for example, a "grey color scale" is obtained and thereby an increased amount of information can be used for determining the extension of the finger print line (column 7 lines 8 to 32; see Figures 1-5). Clearly, Lofberg discloses a biometric sensor and the biometric sensor sensing the characteristic of the finger tip pattern depending on the heat transmission from the finger to a sensing device. One skill in the art understands that the heat of a user is one of the internal characteristic of a user. In other words, Lofberg discloses a biometric sensor configured to detect an internal biometric characteristic.

Furthermore, as describe in specification page 9 lines 18 to 26 and Figures 1 to 3, the biometric sensor is configured to determine specific unique internal biometric markers of a user. In a preferred embodiment of the invention, the sensor includes an emitter and a receiver. The emitter emits light or another form of energy which is partially absorbed and partially reflected by a portion of flesh of a user. Such light or energy may include, but is not limited to, ultrasonic energy, infra red light, near infra red light, ultra violet light, specific wavelength-visible or nonvisible light, white light, or electrical signals. The receiver collects those portions of light or energy that are reflected from the user. Based upon the light or energy reflected, data relating to internal biometric markers may be determined and a biometric profile of the user may be constructed (as in specification page 9 lines 18 to 26 and Figures 1 to 3). Clearly, the biometric

Art Unit: 2612

sensor measures characteristic of a user from a distance. Therefore, Lofberg discloses a biometric sensor configured to detect heat transfer (i.e. an internal biometric characteristic) from the user to determine finger print line pattern.

On page 13, second paragraph, Applicant's arguments with respect to the invention in Lofberg in view of Hiramatsu does not teach or suggest a biometric sensor configured to obtain an internal physiological characteristic is not persuasive.

As discuss above, clearly, Lofberg discloses a biometric sensor configured to detect heat transfer (i.e. an internal biometric characteristic) from the user to determine finger print line pattern. Hiramatsu discloses the authenticity sensor (3) connects to an analog/digital converter (4) and authenticity detecting circuit (5) to convert received signal to obtain characteristic of the finger (column 6 line 5 to column 7 line 15; see Figures 7 to 16) for verification of an authentication of a live finger. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to recognize using an analog/digital converter and authenticity detecting circuit to convert the biometric signal from the authenticity sensor taught by Hiramatsu in a data carrier that exchange of data with terminal equipment of Lofberg because using analog/digital converter and authenticity detecting circuit to convert the biometric signal from the authenticity sensor for verification of a biometrical data would increase security and reliable communication of exchanging information data.

Art Unit: 2612

On page 14, first paragraph, Applicant's arguments with respect to the invention in Lofberg in view of Pavlov et al. does not teach or suggest a biometric sensor configured to obtain an internal physiological characteristic is not persuasive.

As discuss above, clearly, Lofberg discloses a biometric sensor configured to detect heat transfer (i.e. an internal biometric characteristic) from the user to determine finger print line pattern. Pavlov et al. teach that an input/output port (36) to communicate with a semiconductor data memory of microprocessor 34 to communicate data with a programming machine 90 (column 9 line 11 to 23; column 13 line 44 to 68; see Figures 3-6 and 9) in order to read confidential and non-confidential information which has been stored on the self-contained verification card. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to recognize using an input/output port to communicate information data with external source taught by Pavlov et al. in a data carrier that exchange of data with terminal equipment of Lofberg because using input/output port to exchange data between data carrier and terminal equipment would increase security and reliable communication of exchanging information data.

On page 14, second paragraph, Applicant's arguments with respect to the invention in Schmitt in view of Lofberg does not teach or suggest a biometric sensor configured to obtain an internal physiological characteristic is not persuasive.

As discuss above, clearly, Lofberg discloses a biometric sensor configured to detect heat transfer (i.e. an internal biometric characteristic) from the user to determine finger print line

Art Unit: 2612

pattern. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to recognize using a biometric sensor in a data carrier taught by Lofberg. in a biometric sensor of a cellular telephone of Schmitt et al. because using a biometric sensor having an energy transmitter and an energy receiver would increase reliable of sensing biometric of a user.

The examiner maintains that the references cited and applied in the last office actions for the rejection of the claims are maintained in this office action.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "said biometric marker" in line 6. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.



Art Unit: 2612

Claims 1-3, 5-13, 14, 16 and 20-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Lofberg (US# 4,582,985).

Referring to Claims 1-3, 12-13 and 16, Lofberg discloses the biometrically activated device (1) (i.e. a data carrier) (column 3 lines 41 to 65; see Figure 1) comprising a biometric sensor device (2) for obtaining heat transmission from the finger to a sensing device (column 7 lines 8 to 24; see Figures 1-4), a memory (6), a transmitter LED (45), a photo transistor (46) (column 7 lines 49 to column 8 line 29; see Figure 4), and wherein said biometric sensor device (2) further comprises a switch (10) on the sensing elements of the sensing matrix 9' (column 5 lines 11 to 29; see Figures 1 and 4).

Referring to Claims 5-8 and 14, Lofberg discloses the biometrically activated device of Claims 2 and 12, wherein said a light-emitting diodes (45) and a photo-transistor (46) arranged to transmit and to receive reflected light (column 7 line 49 to column 8 line 29; see Figure 4).

Referring to Claim 9, Lofberg discloses the biometrically activated device of Claim 1, Wherein said image memory (6) stores data indicating the finger characteristic of a card user (column 5 lines 30 to 34; column 8 lines 49 to 58; see Figure 3).

Referring to Claim 10, Lofberg discloses the biometrically activated device of Claim 1,

Art Unit: 2612

Wherein said memory (6) includes reference bit sequence to activate an LED (7) (column 5 lines 30 to 44; see Figure 1).

Referring to Claim 11, Lofberg discloses a biometrically activated card, to the extent as claimed with respect to claims 1 to 3 above, and further include a signal processor in communication with said biometric sensor device (2) for converting said received signal into an electrical signal (column 4 lines 42 to 53; see Figure 1).

Referring to Claims 20-22, Lofberg discloses a method of electromagnetically detecting and comparing an unique internal human biometric marker, to the extent as claimed with respect to claim 11 above, and further include comparing said electrical impulse with said pre-existing stored data (column 5 lines 30 to 38; see Figure 1).

Referring to Claim 23-26, Lofberg discloses a method of activating an electrical device, to the extent as claimed with respect to claim 20 above, and further include activating an electrical device (7) (i.e. an indicator) to generate a green radiation signal (i.e. a coded signal) if said user biometric profile matches at least one stored biometric profile (column 5 lines 30 to 38; see Figure 1).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2612

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lofberg (US# 4,582,985) as applied to Claims 2 and 12, and in view of Hiramatsu (US# 5,180,901).

Referring to claims 4 and 15, Lofberg discloses the biometrically activated device of Claims 2 and 12, however, Lofberg did not explicitly disclose wherein said biometric sensor further comprises a translator whereby signals received from said energy sensor are translated into a biometric profile.

In the same field of endeavor of self-contained card, Hiramatsu discloses the authenticity sensor (3) connects to an analog/digital converter (4) and authenticity detecting circuit (5) to convert received signal to obtain characteristic of the finger (column 6 line 5 to column 7 line 15; see Figures 7 to 16) for verification of an authentication of a live finger.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to recognize using an analog/digital converter and authenticity detecting circuit to convert the biometric signal from the authenticity sensor taught by Hiramatsu in a data carrier that exchange of data with terminal equipment of Lofberg because using analog/digital converter and authenticity detecting circuit to convert the biometric signal from the authenticity sensor for verification of a biometrical data would increase security and reliable communication of exchanging information data.

Art Unit: 2612

Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lofberg (US# 4,582,985) in view of Pavlov et al. (US# 4,614,861).

Referring to claim 17, Lofberg discloses a biometrically activated card, to the extent as claimed with respect to claim 1 above, however, Lofberg did not explicitly disclose a data communicator embedded within said second surface of said card, said data communicator in communication with said memory module for communicating data to an external source.

In the same field of endeavor of self-contained card, Pavlov et al. teach that an input/output port (36) to communicate with a semiconductor data memory of microprocessor 34 to communicate data with a programming machine 90 (column 9 line 11 to 23; column 13 line 44 to 68; see Figures 3-6 and 9) in order to read confidential and non-confidential information which has been stored on the self-contained verification card.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to recognize using an input/output port to communicate information data with external source taught by Pavlov et al. in a data carrier that exchange of data with terminal equipment of Lofberg because using input/output port to exchange data between data carrier and terminal equipment would increase security and reliable communication of exchanging information data.

Referring to claim 18, Lofberg in view of Pavlov et al. disclose the biometrically activated card of claim 17, Pavlov et al. disclose a liquid crystal display (14) embedded between card top surfaces 48 and card backing 40 and connect to microprocessor 34 (column 10 lines 8 to 18; column 11 lines 4 to 16; column see Figures 3 and 5).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitt et al. (US# 4,582,985) in view of Lofberg (US# 4,582,985).

Referring to claim 19, Schmitt et al. discloses a biometrically activated portable telecommunication device (190) (column 3 lines 17 to 30; see Figures 14-15),

the portable telecommunication device (190) having an activated state and an inactivated state controlled by an activation switch (i.e. a power control means) (column 6 lines 46 to 64; see Figure 4);

a biometric sensor (30) embedded within said the portable telecommunication device (190) and the biometric sensor on surface of said the portable telecommunication device (column 13 lines 57 to 62; see Figures 14-15);

a fingerprint ID stored memory (208) embedded within the portable telecommunication device (190), said the fingerprint ID stored memory (208) in communication with the biometric sensor (30) and the power control means (column 13 lines 46 to 62; see Figures 4 and 14-15).

However, Schmitt et al. did not explicitly disclose a biometric sensor having an energy transmitter and an energy receiver.

In the same field of endeavor of data carrier, Lofberg teach that a biometric sensor having an energy transmitter and an energy receiver (column 7 line 49 to column 8 line 29; see Figure 4) in order to sense biometric of a user.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to recognize using a biometric sensor in a data carrier taught by Lofberg. in a biometric

Art Unit: 2612

sensor of a cellular telephone of Schmitt et al. because using a biometric sensor having an energy transmitter and an energy receiver would increase reliable of sensing biometric of a user.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lofberg (US# 4,582,985) as applied to 1, and in view of Kaffka et al. (US# 5,974,337).

Referring to claims 27, Lofberg discloses the biometrically activated device of Claim 1, however, Lofberg did not explicitly disclose wherein said the internal physiological characteristic corresponds to one selected from the group consisting of a histological trait, bone density, cardiac rhythm, diacritic notch reading, blood oxygen level, capillary density, glucose level, hematocrit level, and sub-dermal layer analysis.

In the same field of endeavor of physiological biometric operation, Kaffka et al. disclose the internal physiological characteristic includes a oxygen content in blood (i.e. a blood oxygen level) in order to avoid infection with total security.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to recognize using a biometric sensor to measure the oxygen content in blood taught by Kaffka et al. in a data carrier that exchange of data with terminal equipment of Lofberg because using the biometric sensor to measure the oxygen content in blood to convert the biometric signal from the authenticity sensor for verification of a biometrical data would increase security and reliable communication of exchanging information data.

*Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lewis et al. (US# 5,482,034) disclose a method and apparatus for spectrophotometric cerebral oximetry and the like.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam V Nguyen whose telephone number is 571-272-3061. The examiner can normally be reached on Mon-Fri, 8:00AM - 5:00PM.

Art Unit: 2612

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman can be reached on 571- 272-3059. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nam Nguyen  
October 17, 2007



BRIAN ZIMMERMAN  
PRIMARY EXAMINER